REFERENCES

[1] Silberstein, S.D. Migraine. Lancet 363(2004):381-91

[2] Lashley, K.S. Patern of cerebral intergration indicated by the scotoma of migraine. Arch Neurol Psychiatry. 46(1941):331-339

[3] Leao, A.A.P., Spreading depression of activity in the cerebral cortex. J Neurophysiol. 7(1944): 379-390

[4] Wolff, H.G. Headache and other Head Pain. 7 rd edition. New York: Oxford University Press, 2005

[5] Blau, J.N. Migraine: theories of pathogenesis. Lancet 339(1992): 1202-07

[6] Snell, R.S. The cranial nerve nuclei and their central connections In: Snell RS, editor. Clinical neuroanatomy for medical students. Brown and company: Little 1992: 430

[7] Basbaum, A.I., and Jessel, T.M. The perception of pain. In Kendel ER, Schwartz JH, Jessel TM, editors. Priciples of neuroscience. New York: MaGraw Hill, 2000: 472-490

[8] Burstein R (2001) Deconstructing migraine headache into peripheral and central sensitization. Pain 89(2001):107–110

[9] Burstein, R., Cutrer, M.F., and Yarnitsky, D. The development of cutaneous allodynia during a migraine attack clinical evidence for the sequential recruitment of spinal and supraspinal nociceptive neurons in migraine. Brain 123(2000):1703–09

[10] Buzzi, M.G., Carter, W.B., Shimizu, T., Heath, H 3rd., and Moskowitz, M.A. Dihydroergotamine and sumatriptan attenuate levels of CGRP in plasma in rat superior sagittal sinus during electrical stimulation of the trigeminal ganglion. Neuropharmacology 30(1991):1193–1200

[11] Levy, D., Jakubowski, M., and Burstein, R. Disruption of communication between peripheral and central trigeminovascular neurons mediates the antimigraine action of 5HT 1B/1D receptor agonists. Proc Natl Acad Sci USA 101(2004):4274–79

[12] Goadsby, P.J., and Edvinsson, L. The trigeminovascular system and migraine: studies characterizing cerebrovascular and neuropeptide changes seen in humans and cats. Ann Neurol 33(1993):48–56

[13] Olesen, J., Diener, H.C., Husstedt, I.W., Goadsby, P.J, Hall, D., Meier, U., Pollentier, S., and Lesko, L.M. Calcitonin gene-related peptide receptor antagonist BIBN 4096 BS for the acute treatment of migraine. N Engl J Med 350(2004):1104–10

[14] Goadsby, P.J., Edvinsson, L., and Ekman, R. Vasoactive peptide release in the extracerebral circulation of the humans during migraine headache. Ann Neurol. 28(1990):183-187

[15] Goadsby, P.J., Edvinsson, L., and Ekman, R. Release of vasoactive peptides in the extracerebral circulation of man and the cat during activation of the trigeminovascular system. Ann Neurol. 23(1988):193-196

[16] Arban, M.D., Wiklund, L., and Svendgaard, N.A. Originand distribution of cerebral vascular innervations from superior cervical, trigeminal and spinal ganglia investigated with retrograde and anterograde WGA-HRP tracing in the rat. Neuroscience 19(1986):695-708

[17] Goadsby, P.J. Current concepts of the pathophysiology of migraine. In: editor Neurologic Clinics: Advance in Headache. Philadelphia, pa: WB Saunders Co, 15(1997): 27-42

[18] Waite, P.M.E., and David, T. Trigeminal sensory system. In:Paxinos G editor. The rat nervous system. New York: Academic Press. 1995:705-724

[19] Kai-Kai, M.A. Cytochemistry of the trigeminal and dorsal root ganglia and spinal cord of the rat. Comp. Biochem. Physiol. 93(1989):641-644

[20] Ichikawa, H., and Helke, C.J. Distribution, origin and plasticity of galanin-immunoreactivity in the rat carotid body. Neuroscience 52(1993):757-767

[21] Lui, L., Pugh, W., Ma, H., and Simon, S.A. Identification of acetylcholine receptors in adult rat trigeminal ganglion neurons. Brain Res. 617(1993):37-42

[22] Willis, W.D., Westlud, K.N., and Carlton, S.M. Pain In:Paxinos G editor. The ratnervous system. New York: Academic Press. 1995:705-724

[23] Moskowitz, M.A., Nozaki, K., Kraig, R.P. Neocortical spreading depression provokes the expression of c-fos protein- like immunoreactivity within trigeminal nucleus caudalis via trigeminovascular mechanisms. J Neurosci 13(1993):1167–77

[24] William, W.D.,Richard, C.E. Expression of immediate, Early gene. In William, W. D. editor. Sensory mechanisms of the spinal cord: Primary afferent neurons and the spinal dorsal horn. New York: Academic Press. 1995:286-304

[25] Olesen, J., Friberg, L., Olsen, T.S., Iversen, H.K., et al/ Timing and topography of cerebral blood flow, aura, and headache during migraine attacks. Ann Neurol. 28 (1990):791-98

[26] Milner, P.M. Note on a possible correspondence between the scotomas of migraine and spreading depression of Lea˜o. Electroencephalogr Clin Neurophysiol. 10; 4(1958):705

[27] Lauritzen, M. Pathophysiology of the migraine aura: The spreading depression theory. Brain 117(1994):199-210

[28] Moskowitz, M.A. The neurobiology of vascular head pain. Ann Neurol. 16(1984):157-68

[29] Bolay, H., Reuter, U., Dunn, A.K., Huang, Z., Boas, D.A., and Moskowitz, M.A. Intrinsic brain activity triggers trigeminal meningeal afferents in a migraine model. Nat Med 8(2002):136–42

[30] Lambert, G.A., and Michalicek, J. Effect of cortical spreading depression on activity of trigeminovascular sensory neurons. Cephalalgia 19(1999):631-38

[31] Somjen, G.G. Mechanisms of spreading depression and hypoxic spreading depression-like depolarization. Physiol Rev. 2001; 81(3):1065-96

[32] Lauritzen, M. Cortical spreading depression in migraine. Cephalalgia. 21(7) (2001):757-60

[33] Olesen J, Larsen B, Lauritzen M. Focal hyperemia followed by spreading oligemiaand impaired activation of rCBF in classic migraine. Ann Neurol. 9(4) (1981):344-52

[34] Bures, J., Buresova, O., and Krivanek, J. The mechanism and applications of Leao's spreading depression of electroencephalographic activity. Prague: Academia, 1974

[35] Avoli, M. Drapeau, C., Louvel, J., Pumain, R., Olivier, A., and Villemure, J.G. Epileptiform activity induced by low extracellular magnesium in the human cortex maintained in vitro. Ann Neurol. 30(1991):589-96

[36] Sramka, M., Brozek, G., Bruse, J., and Nadvornik, P. Functional ablation by spreading depression possible in human stereotactic neurosurgery. Appl Neurophysiol 40(1997-8):48-61

[37] Grafstein, B. Neuronal release of potassium during spreading depression. In: Brazier MAB, editor. Brain function, Vol. 1, Cortical excitability and steady potential. Berkeley: University of California Press, 1963; 87-124

[38] Nicholson, C., Kraig, R.P. The behavior of extracellular ions dyring spreading depression. In: Zeuthen, T., editor. The application of ion selective microelectrode. Amsterdam: Elseveir, 1981: 217-38

[39] Bailey, P., Bonig, V.G. The isocortex of man. Urbana: University of Illinois Press, 1951

[40] Sugaya, E., Yakato, M., and Noda, Y. Neuronal and glial activity during spreading depression in cerebral cortex in cat. J Neurophysiol 38(1975):822-41

[41] Gardner-Medwin, A.R., Tepley, N., Barkley, G.L.,Moran, J., Nagel-Leiby, S., Simkins, R.T., and et al.. Manetic fields associated with spreading depression anesthetized rabbit. Brain Res 540(1991):153-58

[42] Lord, G.D.A. Clinical characteristics of the migrainious aura. In: Amery,W.K., Wauquier, A., editor. The prelude to the migraine attack. London. Bailliere tindall, 1986:87-98

[43] Lauritzen, M. Cerebral blood flow in migraine and cortical spreading depression [review]. ActaNeural Scand Suppl 113(76) (1987a); suppl:1-40

[44] Lauritzen, M. Cortical spreading depression as a putative nigraine mechanism. Trend Neurosci 10(1987b):8-13

[45] Nicholson, C. Volume transmission and propagation of spreading depression.In: Lehmenkuhler, A., Grotemeyer, K.H., Tegtmeier, F., editors. Migraine: basic mechanism and treatment. Munich: Urban and Schwarzenberg, 1993; 293-308

[46] Leibowitz, D.H., The glial spike theory. I. On an active role of neuroglial in spreading depression and migraine. Proc R Soc Lond Biol. 250(1992):287-95

[47] Kraig, R.P., Dong, L.M., Thisted, R., and Jaeger, C.B. Spreading depression increase immunohistochemical staining of glial fibrillary acidic protein. J Neurosci 11(1991):2187-98

[48] Herrera, D.G., Maysinger, D., Gadient, R., Boeckh, C., Otten, U., Cuello, A.C. Spreading depression induce c-foslike immunoreadtivity and NGF mRNA in the rat cerebral cortex. Brain Res 602(1993):99-103

[49] Nedergaard, C., Astrup, J. Infarct rim: effect of hyperglycemia on direct current potential and (14 C) 2-deoxyglucose phosphorylation. J Cereb Blood Flow Metab 6(1986):607-15

[50] Gill, R., Andine, P., Hillered, L.,Persson, L., and Hagberg, H. The effect of MK-801 on cortical spreading depression in the penumbral zone following focal ischaemia in the rat. J Cereb Blood Flow Metab 12(1992):371-79

[51] Iijima, T., Mies, G., and Hossmann, K.A. Repeated negative DC deflections in rat cortex following midlle cerebral artery occusion are abolished by MK-801: effect on volume of ischemic injury. J Cereb Blood Flow Metab 12(1992): 727-33

[52] Lauritzen, M., Hasen, A.J., Kronborg, D., and Wieloch, T. Cortical spreading depression is associated with arachidonic acid accumulation and preservation of energy charge. J Cereb Blood Flow Metab 10(1990):115-22

[53] Lambert, G.A., and Michalicek, J. Effect of cortical spreading depression on activity of trigeminovascular sensory neurons. Cephalalgia 19(1999):631-38

[54] Lambert, G.A., and Michalicek, J. cortical spreading depression reduces dural blood flow: a possible mechanism for migraine pain. Cephalalgia 14(1994):430-36

[55] Piper, R.D., Lambert, G.A., and Duckworth, J.W. Cortical blood flow changes during spreading depression in cat. Am. J. Physiol. 261(1991):H96-H102

[56] Ebersberger, A., Schaiple, H.G., and Averbeck, B. Is there a correlation between spreading depression, neurogenic inflammation and nociception that might cause migraine headache? Ann Neurol. 49(2001):7-13

[57] Read, S.J., Smith, M.I., and Benham, C.D. Furosemide inhibits regenerative cortical spreading depression in anesthetized cats. Cephalalgia 17(1997):826-32

[58] Smith, M.I., Read, S.J., and Chan, W.N. Repetitive cortical spreading depression in a gyrencephalic feline brain. Cephalalgia 20(suppl 6) (2000):546-53

[59] Bolay, H., Reuter, U., Dunn, A.K., Huang, Z., Boas, D.A., and Moskowitz, M.A. Intrinsic brain activity triggers trigeminal meningeal afferents in a migraine model. Nat Med 8(2002):136–42

[60] Ingvardsen, B.K., Laursen, H., Olesen, U.B., and Hansen, A.J. Possible mechanim of c-fos expression in trigeminal nucleus caudalis following cortical spreading depression. Pain 72(1997):407-15

[61] Meng, W., Colonna, D.M., Tobin, J.R., and Busija, D.W. Nitric oxide and prostaglandins interact to madiat arterial dilation during cortical sprading depression. Am. J. Physiol. 269(1995):176-81

[62] Wahl, M., Schilling, L., Parsons, A.A., and Kaumann, A. Involment of calcitonin-gene related peptide *CGRP) and nitric oxide (NO) in the pial artery dilatation elicited by cortical spreading depression. Brain Res. 637(1994):204-10

[63] Koponen, S., Keinanen, R., and Roivanen, T. Spreading depression induces expression of caisium-independent protein kinase C subspecies in ischaemia-sensitivity cortical layers. Neuroscience 93(Suppl 3) (1999):985-93

[64] Amaya, F., Oh-hashi, K., Naruse, Y., and Iilima, N. Local inflammation increase vanilloid receptor 1 expression within distict subgroups of DRG neurons. Brain Res. 963(2003):190-96

[65] Fukuoka, T., Tokunaka, A., and Tachibabana, T. VR1, but not P2 X3, increases in the spared L4 DRG in rats with L5 spinal nerve ligation. Pain 99(2002):111-20

[66] Caterina, M.J. and Julius, D. The vanilloid receptor: A molecular gateway to the pain pathway. Annu. Rev. Neurosci. 24(2001):487-517

[67] Clapham, D.E. TRP channels as cellular sensors. Nature 426(2003):517-24

[68] Garcia-Sanz, N., Ferandez-Carvajal, A., Morenilla-Palao, C., Planells-Cases, R., Fajardo-Sanchez, E., Fernndez-Ballester, G. and Ferrer-Montiel, A. () Identification of tetramerization domain in the C-terminus of the vanilloid receptor. J Neurosci 24(2004):5306-14

[69] Messeguer, A., Rosa, P.C., and Antonio F.M. Physiology and Pharmacology of the vanilloid Receptor. Curr Neuropharmacol 4(2006):1-15

[70] Szallasi, A., and Blumberg, P.M. Vanilloid receptors: new insights enhance potential as a therapeutic target. Pain 68(1996):195-208

[71] Szallasi, A. Vanilloid (capsaicin) receptor in the rat: distribution in the brain, regional differences in the spinal cord, axonal transport to the periphery, and depletion by systemic vanilloid treatment. Brain Res 703(1995):175-83

[72] Guo, A., Vualchanova, L., Wang, J., Li, X., and Elde, R. Immunocytochemical localization of the vanilloid receptor 1 (VR1): relationship to neuropeptides, the P2 X3 purinociceptor, and IB4 binding site. Eur J neurosci 11(1999):946-58

[73] Tominaga, M. The cloned capsaicin receptor intergrates multiple pain-producing stimuli. Neuron 21(1998):531-43

[74] Caterina, M.J., Schumacher, M.A., Tominaga, M., Rsen, T.A., Levine, J.D., and Julius, D. The capsaicin receptor: a heat-activated ion channel in the pain pathway. Nature 398(1997):816-24

[75] Szolcsanyi, J., and Jasco-Gabor, A. Sensory effects of capsaicin congeners, I: relationship between chemical structure and pain-producing potency. Drug Res 25(1975):1877-81

[76] Nagy, I., and Rang, H.P. Similarities and differences between the responses of rat sensory neurons to noxious heat and capsaicin. J. Neurosci. 19(1999b):10647–55

[77] Marinelli, S., Vaughan, C.W., MacDonald, J.C. and Connor, M. Capsaicin activation of glutamatergic synaptic transmission in the rat locus coeruleus in vitro. J. Physiol 543(2002):531-40

[78] Marinelli, S., Pascucci, T., Bernardi, G., Puglisi-Allegra, S. and Mercuri, N.B. Activation of TRPV1 in the VTA excites dopaminergic neurons and increases chemical- and noxiousinduced dopamine release in the nucleus accumbens. Neuropsychopharmacology 30(2005):864-70

[79] Cesare P, McNaughton P. A novel heatactivated current in nociceptive neurons and its sensitization by bradykinin. Proc. Natl. Acad. Sci. USA 939(1996):15435–9

[80] LaMotte, R.H, and Campbell, J.N. Comparison of response of warm and nociceptive c-fiber afferents in monkey with human judgments of thermal pain. J. Neurophysiol. 41(1978):509– 28

[81] Raja, S.N., Meyer, R.A., Ringkamp, M., and Campbell, J.N. Peripheral neural mechanisms of nociception. In; Textbook of Pain, ed. PD Wall, R Melzack, 1999; pp. 11–57. Edinburgh: Churchill Livingstone

[82] Jordt, S.E., Tominaga, and M., Julius, D. Acid potentiation of the capsaicin receptor determined by a key extracellular site. Proc. Natl. Acad. Sci. USA 97(2000):8134–35

[83] Kirschstein, T., Busselberg, D., and Treede, R.D. Coexpression of heat-evoked and capsaicinevoked inward currents in acutely dissociated rat dorsal root ganglion neurons. Neurosci. Lett. 231(1997):33–36

[84] Nagy, I., and Rang, H.P. Similarities and differences between the responses of rat sensory neurons to noxious heat and capsaicin. J. Neurosci. 19(1999b):10647–55

[85] Reichling, D.B., and Levine, J.D. Heat transduction in rat sensory neurons by calciumdependent activation of a cation channel. Proc. Natl. Acad. Sci. USA 94(1997):7006–11

[86] Kirschstein, T., Greffrath, W., Busselberg, D., and Treede, R.D. Inhibition of rapid heat responses in nociceptive primary sensory neurons of rats by vanilloid receptor antagonists. J. Neurophysiol. 82(1999):2853–60

[87] Caterina, M.J., Rosen, T.A., Tominaga, M., Brake, A.J., and Julius, D. A. Capsaicin receptor homologue with a high threshold for noxious heat. Nature 398(1999):436–41

[88] Handwerker, H.O., and Reeh, P.W. Pain and inflammation. In; Proceedings of the 6th World Congress on Pain, ed. MR Bond, JE Charlton, CJ Woolf, 1991; pp. 59–70. Amsterdam: Elsevier

[89] Levine, J., and Taiwo, Y. Inflammatory pain. In; Textbook of Pain, ed. PD Wall, R Melzack, 1994; pp. 45–56. Edinburgh: Churchill Livingstone

[90] Bevan, S., and Geppetti, P. Protons: small stimulants of capsaicin-sensitive sensory nerves. Trends Neurosci. 17(1994):509–12

[91] Chen, C.C., England, S., Akopian, A.N., and Wood, J.N. A sensory neuron-specific, proton gated ion channel. Proc. Natl. Acad. Sci. USA 95(1998):10240–45

[92] Lingueglia, E., de Weille, J.R., Bassilana, F., Heurteaux, C., Sakai, H., et al. A modulatory subunit of acid sensing ion channels in brain and dorsal root ganglion cells. J. Biol. Chem. 272(1997):29778–83

[93] Waldmann, R., Bassilana, F.,Weille, J., Champigny, G., Heurteaux, C., and Lazdunski, M. Molecular cloning of a non-inactivating proton-gated Na+ channel specific for sensory neurons. J. Biol. Chem. 272(1997a):20975–78

[94] Waldmann, R., Champigny, G., Bassilana, F., Heurteaux, C., and Lazdunski, M. Aprotongated channel involved in acid sensing. Nature 386(1997b):173–77

[95] Li, C., Peoples, R.W., and Weight, F.F. Enhancement of ATP-activated current by protons in dorsal root ganglion neurons. Eur. J. Physiol. 433(1997):446-54

[96] Stoop, R., Surprenant, A., and North, A. Different sensitivity to pH of ATP-induced currents at four cloned P2X receptors. J. Neurophysiol. 78(1997):1837–40

[97] Kress, M., Fetzer, S., Reeh, P.W., and Vyklicky, L. Low pH facilitates capsaicin responses in isolated sensory neurons of the rat. Neurosci. Lett. 211(1996):5-8

[98] Martenson, M.E., Ingram, S.L., and Baumann, T.K. Potentiation of rabbit trigeminal responses to capsaicin in a low pH environment. Brain Res. 651(1994):143–47

[99] Petersen, M., and LaMotte, R.H. Effect of protons on the inward current evoked by capsaicin in isolated dorsal root ganglion cells. Pain 54(1993):37–42

[100] Meunie,r J.C., Mollereau, C., Toll, L., Suaudeau, C., Moisand, C., et. al. Isolation and structure of the endogenous agonist of opioid receptor-like ORL1 receptor. Nature 377(1995): 532–35.

[101] Reinscheid, R.K., Nothacker, H.P., Bourson, A., Ardati, A., Hernningsen, R.A., Bunzow, J.R., Grandy, D.K., Langen, H., Monsma, F.J., and Civelli, O., Orphanin FQ: a neuropeptide that activiates an opioid-like G pratein-coupled receptor. Science 270(1995):792-94

[102] Tristan, D., Heinricher, M.M., and Grandy, D.K. Orphanin FQ/nociceptin: a role in pain and analgesia, but so much more. Trend Neurosci 21(5)(1998):215-21

[103] Neal, C.R. Jr., Mansour, A., Reinscheid, R., Nothacker, H.P., Civelli, o., and Watson, S.J. Jr. Localization of orphanin FQ (nociceptin) pepetide and messenger RNA in the central nervous system of the rat. J Comp Neurol 406(4) (1999):503-47

[104] Witta, J., Palkovits, M., Rosenberger, J. and Cox, B.M. Distribution of nociceptin/orphanin FQ in adult human brain. Brain Res 997(1) (2004):24-29

[105] Hou, M., Uddman, R., Tajti, J., and Edvinsson, L.Nociceptin immunoreactivity and receptor mRNA in the human trigeminal ganglion. Brain Res 964(2) (2003):179-88

[106] Ruscheweyh, R., and Sandkühler, J. Bidirectional actions of nociceptin/orphanin FQ on Aδ-fibre-evoked responses in rat superficial spinal dorsal horn in vitro. Neuroscience 107(2) (2001):275-81

[107] Luo, C., Kumamoto, E., Furue, H., Chen, J., and Yoshimura, M. Nociceptin inhibits excitatory but not inhinitory transmission to substantia gelationosa neurons of adult rat spinal cord. Neuroscience 109(2) (2002):349-58.

[108] Menendez, L., Lastra, A., Villanueva, N., Hidalgo, A., and Baamonde, A. Spinal nociceptin inhibits AMPA-induced nociceptive behavior and Fos expression in rat spinal cord. Pharmacol Biochem Behavior 74(3) (2003):657-61

[109] Wang, X.M., Zhang, K.M., and Mokha, S.S. Nociceptin (orphanin FQ), an endogenous ligand for the QRL1 (opioid-receptor-like1) receptor; Modulates responses of trigeminal neurons evoked by excitatory amino acids and somatosensory stimuli. J Neurophysiol. 76(5) (1996): 3568-72

[110] Wang, X.M., Zhang, K.M., Long, L.O., and Mokha, S.S. Orphanin FQ (nociceptin) modulates responses of trigeminal neurons evoked by excitatory amino acids and somatosensory stimuli, and blocks the substance P-induced facilitation of N-methyl-D-aspartate-evoked responses. Neuroscience 93(2)(1999):703-712

[111] Flores, C. A., Wang, X. M., Zhang, K, M., and Mokha, S. S. Orphanin FQ produced gender-specific modulation of trigeminal nociception: behavioral and electrophysiological observation. Neuroscience 105(2) (2001):489-98

[112] Ertsey, C., Hantos, M., Bozsik, G., and Tekes, K. Plasma nociceptin levels are reduced in migraine without aura. Cephalalgia 25(4) (2005):261-66

[113] Ertsey, C., Hantos, M., Bozsik, G., and Tekes, K. Circulating nociceptin levels during the cluter headache period. Cepharalgia 24(4) (2004): 280-83

[114] Hunt, S.P., Pini, A., and Evan, G. Induction of c-fos- like protein in the spinal cord neurons following sensory stimulation. Nature 328(1987):632-34

[115] Moskowitz, M.A., Nozaki, K., and Kraig, R.P. Neocortical spreading depression provokes the expression of c-fos protein-like immunoreactivity in trigeminal nucleus caudalis via trigeminovascular mechanism. J Neurosci 13(1993):1167-77

[116] Bures, J., Buresova, O., and Krivanek, J. in: The mechanism and application of Leao's spreading depression of electroencephalographic activity, Academic Press, New York, 1974

[117] Meloche, J. Triptans and migraine: which drug for which patient? Can. J. Diagnosis (1999): 67–77

[118] Mitsikostas, D.D., Sanchez del Rio, M., Moskowitz, M.A., and Waeber, C. Both 5-HT1B and 5-HT1F receptors modulate c-fos expression within rat trigeminal nucleus caudalis. Eur. J. Pharmacol. 369(1999):271– 77

[119] Hansen, A.J., Quisstorff, B., and Gjedde, A. Relationship between local changes in cortical bloodflow and extracellular K+ during spreading depression. Acta Physiol Scand. 109(1999):1-6

[120] Krivanek, J. Some metabolic dhande accompanying Leao's spreading cortical depression in the rat. J. Neurochem. 691991):183-89

[121] Grafstein, B. Neuronal release of potassium during spreading depression, in: M.A.B. Brazer (Ed.), Brain function, Vol.1, University of California Press, Berkeley, CA, 1963, pp.87-124, Cortical Excitability and steady Potential, Relations of Basic Research to Space Biology

[122] Hansen, A. J., Zeuthen, T. Extracellualar ion concentration during spreading depression and ischemia in the rat brain cortex. Acta physiol. Scand. 113(1981): 437-45

[123] Kraig, R.P., Nicholson, C. Extracellular ionic variations during spreading depression. Neuroscience 3(1978):1045-59

[124] Bures, J., Buresova, O., and Krivanek, J. in: The mechanism and application of Leao's spreading depression of electroencephalographic activity. Academic Press, New York, 1974

[125] Mies, A., Paschen, W. Regional changes of blood flow, glucose, and ATP content determined on brain sections during a single passage of spreading depression in the rat brain cortex. Exp Neurol 84(1984):249-58

[126] Hunt, S.P., Pini, A., and Evan, G. Induction of c-fos- like protein in the spinal cord neurons following sensory stimulation. Nature 328(1987):632-34

[127] Wang, X.M., Zhang, K.M., and Mokha, S.S. Nociceptin (orphanin FQ), an endogenous ligand for the QRL1 (opioid-receptor-like1) receptor; Modulates responses of trigeminal neurons evoked by excitatory amino acids and somatosensory stimuli. J Neurophysiol. 76(5) (1996): 3568-72

[128] Martenson, M.E., Ingram, S.L., and Baumann, T.K. Potentiation of rabbit trigeminal responses to capsaicin in a low pH environment. Brain Res. 651(1994):143–47

[129] Tominaga, M., Caterina, M.J.,Malberg, A.B., Rosen, T.A., Gilbert, H., Skinner, K., Raumann, A.I., and Julius, D. The cloned capsaicin receptor integrates multiple pain producing stimuli. Neuron 21(1998):531-43

[130] Supronsinchai, W., Sanguanrungsirikul, S., and Srikiatkhachron, A. Serotonin depletion, cortical spreading depression, and trigeminal nociception. Headache 46(1) (2006): 34-39

[131] Petersen, M., and LaMotte, R.H. Effect of protons on the inward current evoked by capsaicin in isolated dorsal root ganglion cells. Pain 54(1993):37–42

[132] Sakas, D.E., Moskowitz, M.A., Wei, E.P., Kontos, H.A., Kano, M., Ogilvy, C. Trigeminovascular fibers increase blood flow in cortical grey matter by axon-dependent mechanisms during acute, severe hyper tension or seizures: Proc Natl Acad Sci USA 86(1989):1401-05

[133] Sakas, D.E., Moskowitz, M.A., Wei, E.P., Kontos, H.A., Kano, M., Ogilvy, C. Trigeminovascular fibers increase blood flow in cortical grey matter by axon-dependent mechanisms during acute, severe hyper tension or seizures: Proc Natl Acad Sci USA 86(1989):1401-05

[134] Menetrey, D., Gannon, A., Levine, J.D., Basbaum, A. I. The expression of c-fos protein in presumed-nociceptive interneurons and projection neurons of the rat spinal cord: anatomical mapping of the central effects of noxious somatic, articular and visceral stimulation. J Comp Neurol 258(1989):177-95

[135] Shigenaga, Y., Chen, I.C., Suemune, S., Nishimori, T., Nasution, I. D., Yoshida, A., Sato, H., Okamoto, T., Sera, M., and Hosoi, M. Oral and facial representation within the medullary and upper cervical dorsal horns in the cat. J Comp Neurol 243(1986):388-408

[136] Anton, F., Herdegen, T., and Peppel, P., Leah, J.D. C-fos-like immunoreactivity in rat brainstem neurons following noxious chemical stimulation of the nasal mucosa. Neuroscience 41(1991):629-41

[137] Susane, M., and Hans, C. P. Control of glutamate and GABA release by nociceptin/orphanin FQ in the rat lateral amygdale. J Physiol 523.3(2001):701-12

[138] Matteo, M., Sara, S., Francesca, P., Flora, M., Carmela, D. S., et. al. Pharmacological profiles of presynaptic nociceptin/orphanin FQ receptors modulating 5-hydroxytryptamine and noradrenaline release in the rat cortex. Bri J Pharmacol. 138(2003):91-8

[139] Schilcker, E. and Morari, M. Nociceptin/Orphanin FQ and neurotransmitter release in the central nervous system. Peptides 21(2000):1023-9

BIOGRAPHY

Name	Mr. Thas Phisonkunkasem
Date of birth	25th July 1983
Place of birth	Bangkok, Thailand
Instructions attended	Chulalongkorn University (2002-2005)
	Bachelor degree of Science (Sport Science)